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AUTHOR Jackson, Anita
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ABSTRACT

Students' views concerning research were studied with a sample of students in the arts, the natural sciences, and social sciences. Questionnaire responses were obtained from 225 graduate and undergraduate students attending four colleges. Students in the arts (music, art, and communicative arts) comprised 49 percent of the sample; 29 percent were in the natural sciences, and 22 percent were in the social sciences. The number of students' subscriptions to research journals and the frequency of reference to research journals were determined. Students were also asked whether they were currently or previously enrolled in a research class, or whether they planned to enroll. The number of independent research studies the students had completed was also determined. Finally, students listed problem areas for which they thought research might provide answers. Students showed evidence of a grasp of fundamental human needs and possible ways of meeting these needs. It is concluded that more attention should be directed to the dissemination of research findings in the arts and that more collaborative research between and within these fields should be encouraged. (SW)

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RESEARCH IN HIGHER EDUCATION

THE ARTS/THE SCIENCES

Anita Jackson
Jackson, Mississippi
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RESEARCH IN HIGHER EDUCATION

THE ARTS/THE SCIENCES

INTRODUCTION

Higher education in America has been and continues to be reactive to contemporary trends. A rational view of current events and educational plans for the future indicate that we must continue to support teaching and learning in both academic and non-academic areas. We must prepare individuals to meet challenges that will result from changes in technology, the arts, economics, the sciences, and in social growth. Since recognition is generally based on accomplishments, provisions must be made for activities that encourage the development of knowledge and skills, the creation of new ideas, the understanding of human relationships, and the recognition of the requirements of a productive life.

Human experiences must be addressed in a comprehensive and balanced educational program that will show how all dimensions fit together for more effective living. This is in keeping with the main purpose of higher education which is to contribute to the betterment of mankind or to improve the quality of life.

In addition to basic problems such as financial support, enrollment trends, and the formulation of philosophical goals, current issues in higher education include:

Mastery Learning

Competency-Based or Performance-Based Education

Computer Assisted Instruction

Teaching Machines

Modular Scheduling

Student-Organized Activities

Accountability

What role might research, particularly at the higher education level, play in finding solutions to problems related to these issues? Do students in the arts view research as a practical means of finding solutions to problems? Are their beliefs concerning research different from those of students in the natural sciences or from those of students in the social sciences? Answers to these questions are significant and will influence current and future strategies in the higher education process.

Interaction with music students in a research setting, observation of related student and faculty activities in the sciences and in other fields, general concern for future research in higher education, current problems, and the possibility of finding practical solutions proved to be the motivation for developing a research profile of students in the arts and the sciences. Information obtained from this study provided basic support for a continuing research thrust in higher education.

THE SURVEY: DESCRIPTION AND RESULTS

Students in the arts, the sciences, and in other disciplines on four college campuses were asked to respond to a survey. Both public and private institutions in urban and rural settings were

contacted. A total of 300 questionnaires were distributed. Responses were received from a 'random' selection of 225 graduate and undergraduate students whose ages ranged from 19 to 45 years. All graduate students were at the masters level. Students in the arts (music, art, and communicative arts) comprised 49 percent of the total, 29 percent were in the natural sciences, and 22 percent were in the social sciences with the highest concentration in the fields of sociology and psychology. A detailed description of the sample is shown in Table 1.

TABLE 1

MAJOR AREAS, CLASSIFICATION, SEX AND AGE RANGE OF SUBJECTS

	MAJOR AREAS			
	THE ARTS	THE SCIENCES	OTHER FIELDS	GRAND TOTAL
Classification				
Graduate	58	33	35	126
Undergraduate	52	32	15	99
Total	110	65	50	225
Age Range				
19-24	76	40	28	144
25-35	29	16	19	64
Over 35	5	9	3	17
Total	110	65	50	225
Sex				
Female	62	35	40	137
Male	48	30	10	88
Total	110	65	50	225

KNOWLEDGE AND USE OF RESEARCH MATERIALS

The subjects were asked to indicate the number of research journals to which they subscribe and also to indicate the frequency of reference to these journals, so that a determination could be made concerning their knowledge and use of research materials in each major area. The results as shown in Table 2 revealed that more than half of the respondents do not subscribe to a research journal. However, 51 students subscribe to one research journal and 14 students subscribe to more than one research journal. A higher percentage of students in the natural sciences subscribe to one journal than those in the arts and in other fields. No students in the fields of art and communicative arts indicated that they subscribe to more than one research journal whereas four students in the natural sciences, five in music, and five in other disciplines subscribe to more than one journal.

Information on the use of research materials showed that 39 percent of the students often refer to research journals, 56 percent seldom make use of the journals and five percent said that they never use research journals. Students in the area of art showed the highest rate of nonuse. By comparison, students in communicative arts, music, natural sciences, and in other disciplines showed similar rates of nonuse. There were indications of a general knowledge of the existence of research materials in all areas and positive reactions concerning these materials were evidenced. Specific knowledge or use of material was less evident.

TABLE 2

RESEARCH JOURNAL SUBSCRIPTIONS AND
FREQUENCY OF REFERENCE TO JOURNALS

	MAJOR AREAS				
	THE ARTS	THE SCIENCES	OTHER FIELDS	GRAND TOTAL	%
Number of Subscriptions					
None	84	40	36	160	.71
One	21	21	9	51	.22
Two or More	5	4	5	14	.07
Total	110	65	50	225	100
Frequency of Reference					
Often	40	38	10	88	.39
Seldom	65	25	36	126	.56
Never	5	2	4	11	.05
Total	110	65	50	225	100

If research in higher education is to maintain its present status and meet increased demands, there must be an awareness of current research emphasis. Perhaps the most observable differences between the three groups of students resulted when they were asked about the quality and quantity of current research in their major areas. Table 3 shows that only three students in the natural sciences indicated that they did not know about the quality of research in their major area and 12 did not know about the quantity of research in the natural sciences. A much higher number of students in the arts were not aware of the quality and quantity of research and 20 percent of those in other fields did

not know about the quality and quantity of research in their major areas. Of those who said that they were informed about the quantity of research in their major areas, a majority thought that the amount was adequate. Only eight percent of those expressing opinions thought that the quantity of research was inadequate.

TABLE 3

PERCENTAGES OF STUDENT AWARENESS
OF QUALITY AND QUANTITY OF RESEARCH

DESCRIPTION	PERCENTAGES		
	THE ARTS	THE SCIENCES	OTHER FIELDS
Aware of Quality	.74	.96	.80
Unaware of Quality	.26	.04	.20
Aware of Quantity	.74	.82	.80
Unaware of Quantity	.26	.18	.20

RESEARCH ACTIVITY

Active research is essential to sustained growth in the arts, the sciences, and in other fields. Since future research in higher education will be dictated by today's students, the respondents were asked if they were currently enrolled, had previously enrolled, or if they planned to enroll in a research class. The results showed that 60 percent of the students were either currently enrolled in a research class or had previously completed a research class. As expected, a majority of these were graduate students in all fields. It was observed that 33 percent of the students had

no research experience and had no future plans in that direction. Future plans for research were stated by 45 percent of those surveyed. A majority said that this would be required as a part of future studies rather than taken as electives.

Another area where differences in responses were more observable was in the number of independent research studies completed and the number of studies in which students had participated or given assistance in some way. With regard to specific activities, one-third of the students in the natural sciences and more than a third of those in other areas, excluding the arts, had completed an independent research study or had assisted with one or more studies. Only 23 percent of students in the arts indicated such participation.

Results showed that 98 percent of the students in all fields agree that research is a systematic search for solutions to problems and that research provides reasonable solutions to problems. A total of 95 percent of the respondents indicated that if research was to be conducted they preferred to choose the area rather than to have a topic assigned by the instructor.

The final survey item requested students to list problem areas for which they thought research might provide answers. Since the item did not specify topics in the major area of study a cross section of answers resulted. Suggestions concerning areas for investigation support the previously stated belief that research can provide reasonable solutions to problems. Students listed these areas of need for future research . Topics are not listed in any specific order.

Economics: urban development, creation of jobs and economics as related to the general status of the arts

Human behavior

Cultural differences

Relationship of I. Q. and achievement

The relationship of musical and nonmusical studies or how music can assume a more viable role in all segments of life

Teaching strategies for special students including those classed as gifted

Band contests and festivals--criteria and procedures

Psychology - learning theories

Discipline/deliquency/crime

Energy/pollution/nuclear power

Modern medicine - biomedical areas

Learning disabilities/birth defects

Martial arts - physical and mental aspects

Arts ages - historical periods

Standardized tests

Governmental procedures/human rights

World health/ future food supply

Neurological diseases/viral diseases/septic diseases

Genetics - mutations - cloning

Cardiovascular diseases/hypertension

Kidney diseases

Allergies

Cancer cures - sickle cell anemia

Marriage - family - child abuse

Alcohol-drug abuse

IMPLICATIONS

Even though we may formulate and express our understanding of the value of research in higher education in distinctively modern terms, our decisions have been influenced by an intellectual and an artistic heritage. Systematic intellectual and artistic experiences have made possible the examination of scientific theories and the development of insights concerning the arts in day-to-day living. Not only have these two areas been explored separately, but studies on the relationship of the arts and the sciences have become more frequent during recent years. For the social scientist, studies concerning the quality of life within different cultures as related to external values or economics, technology, and the qualitative state of human values, self expression, or creativity have received increased attention.

Generally there are apparent differences in value perception between artists and scientists and there are also differences, whether implicit or explicit, within these fields. According to the results of this survey the greater differences are in the areas of awareness of the quality and quantity of research and in the number of independent studies and the number of assists in research studies.

It has become obvious to some practitioners in both the artistic and scientific arenas that there may not be technological solutions to every human problem. Self contradictions and general contradictions make the decision-making process even more complicated. Potent implications are inherent in any resolutions made in these areas. For example: What are the individual and

collective functions of the arts, the natural sciences and the social sciences? What should be the place of moral functions in developing proper responses and attitudes concerning the values of societal institutions? Is there an existing model upon which decisions can be based? Are human possibilities limitless in reality? Is there a single connection between social, artistic, philosophical, and biological needs? Are there dangers of improper use of scientific or theoretical information resulting from research? Answers to these questions have been researched in practically every sphere by generations of scholars.

In general, technological advancements, precision, and decisive forecasting are major values of the sciences. Rapid change can sometime cause confusion about these values. The arts allow for individual values or self expression of the human spirit as it relates to the quality of life. Values of the social sciences are found in the process of developing and contributing to the understanding of a diverse society.

The range or selection of appropriate measures in research at the higher education level must be decidedly broader than in previous years with a great variety in the types of areas included. A wider classification with regard to society's needs and methods of communications will contribute to a balanced and more effective program. Initial activities in new directions might be fragmented. Continuing active participation will result in more concrete experiences that will be compatible with and will contribute to the general body of knowledge and to specific principles.

Optimistically assuming that humanity will continue to have the ability to exercise a degree of control over basic conditions,

the university must play a major role in the development of this ability. The process will most likely continue to include vertical acceleration or obvious progress from one level to the next. Healthy skepticism no doubt exists concerning this matter and there may be extensive ramifications resulting from any specific commitments by individuals or groups in higher education research or in any area of higher education.

CONCLUSIONS

This survey showed that students in the arts, the natural sciences, and the social sciences view research as a practical means of finding solutions to problems. College and university students who responded to this survey show evidence of a firm grasp of fundamental human needs and possible ways of meeting these needs.

Although a generally positive attitude concerning the purpose and results of effective research was indicated by the respondents, greater effort is needed in the areas of the knowledge and use of research materials and in the area of active research. The data resulting from this study are not perceived as conclusive but basic support for future research in higher education is provided.

Topics suggested for research indicate that the respondents believe that mankind is capable of a continual process of actualizing its uniquely human potential or of defining individual roles within the general society. There seem to be realistic appraisals of major changes indicated by emerging trends. Continued critical analysis through sustained research efforts is essential; however,

because of extensive diversity there is no single research agenda recommended. These specific conclusions are based on survey results.

1. More attention needs to be given to the dissemination of research findings in the arts in an effort to create more enthusiasm and to make better use of theories that have been tested and have yielded positive results. This thrust, as indicated by the responses, is currently more evident in the natural sciences and in the social sciences.

2. More collaborative research between and within these fields should be encouraged. The future of research in higher education could depend on the growth of successful collaborative, interdisciplinary, or comparative studies. Technology will continue to play a major role in communications. Increased awareness of responsibility and more basic ideas concerning human responses might be the most positive products of sustained research efforts.

Observations of current trends indicate that we will either be thwarted by continuous and rapid change or we will vigorously rise to meet the challenges resulting from problems for which research in higher education might provide practical solutions.

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